

AUDIO

FAQ

Q Manufacturers of music-production hardware and software talk about ASIO drivers. What are they, and do they have any disadvantages?

A Windows' Multimedia Extensions (MME) audio drivers work with any software application and sound card, but they can take a few milliseconds to respond. This isn't a problem for media players, but if you are playing a note on an instrument connected to your computer, any delay will cause it to sound off-time.

Audio Stream Input-Output (ASIO) and Windows Driver Model (WDM) drivers allow software and sound cards to communicate with much lower latency, which is the time it takes for the software to respond to your input. ASIO is much more common than WDM among musician-oriented hardware and software, but the system can address only one ASIO sound card at a time. This can cause monitoring problems when recording with USB microphones or Behringer's iXe USB guitar, reviewed opposite.

Ben Pitt

Music and photography expert

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SONY NW-S706F

★★★★★

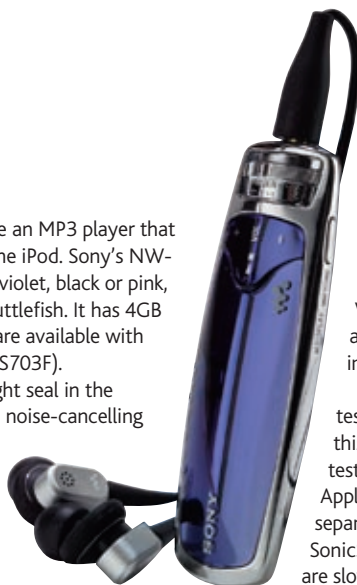
£130 inc VAT



It's refreshing to see an MP3 player that isn't modelled on the iPod. Sony's NW-S706F, available in violet, black or pink, looks more like a cuttlefish. It has 4GB of storage, but other models are available with 2GB (the S705F) or 1GB (the S703F).

The earphones create a tight seal in the ear to cut out noise, and have noise-cancelling technology that reduces it further. A microphone built into the outside of each driver picks up environmental sounds, which are amplified, inverted and played through the earphones along with the music you're listening to. Noise is reduced rather than eliminated, and, ironically, the electronics create a bit of hiss, but it still makes a huge difference when listening on a train or busy street. Because the electronics are built into the player, there's no need for a separate battery pack, which can be as big as this diminutive MP3 player on noise-cancelling headphones such as Sennheiser's PXC250 (Best Buy, *Labs*, *Shopper* March 2007).

The NW-S706F's rotating dial skips through tracks or albums. It works well, but the other buttons are scattered haphazardly around the player. The colour screen can display album artwork, but the images are a little slow to update, so text and images run out of sync when scrolling through



albums. Still, the interface is acceptable, and after a few minutes' use we found it easy to navigate to the desired songs. We had less luck in direct sunlight, though, as the reflective case made the screen impossible to read.

Lasting over 30 hours in our playback test, and recharging in little over an hour, this player's battery is among the best we've tested. It charges via USB only but, unlike with Apple's players, you can't buy a mains charger separately. You must use the supplied SonicStage software for USB transfers, which are slow at just under 1MB per second. Filling the player's 3.79GB formatted capacity took over an hour. You'll also need SonicStage to download copy-protected ATRAC3 files from the SonyConnect store. The S706F can't play protected WMA files.

The earphones' highly effective noise isolation is complemented by superb sound quality. Bass was as deep and full as we've heard from bud-style earphones,

and overall sound was smooth and focused. The player pulled its weight, too, with no hint of distortion even at maximum volume with heavy EQ applied.

If sound quality is your top priority, then Sony's NW-S706F is the player to buy. There are lots of cheaper 4GB players, but £130 is still competitive, especially considering that the earphones sound as good as sets costing £50.

Ben Pitt

SUMMARY

- ✓ Excellent noise-cancelling earphones
- ✓ Long battery life
- ✗ Controls take some learning

MP3 PLAYER 4GB capacity, supports MP3, WMA, Wav and ATRAC3, USB Hi-Speed interface
PART CODE NWS706F
SUPPLIER www.advancedmp3players.co.uk
DETAILS www.sony.co.uk

PERFORMANCE (see page 56)



Also consider...

PHILIPS SLA5520

★★★★★

£85 inc VAT



Philips' SLA5520 takes music from your PC via a wireless network and plays it on your hi-fi. It comes with Philips' own server program, but you can also use it with Windows Media Connect.

The SLA5520 is quite a basic device, but it's a great buy if you want an easy way to play your music wirelessly.



WIRELESS NETWORK MUSIC PLAYER Supports MP3, Wav, WMA, WMA-DRM, 802.11g interface, WEP or WPA encryption, 3.5mm socket audio output. Requires Windows 2000/XP
SUPPLIER <http://uk.insight.com>
DETAILS www.philips.com
✓ Good value ✗ Screen hard to read
FULL REVIEW Jul 2006

ISYMPHONY M2

★★★★★

£150 inc VAT



This iPod-friendly micro hi-fi has so many features it's hard to list them all here. It's a shame there's no DAB radio, but it sounds decent, with plenty of bass, and enough volume for a kitchen, bedroom or small living room.

The M2 is great value, and hooked up to a TV it can even play back DVDs.



HI-FI SYSTEM CD/DVD player and FM radio with iPod dock, USB port and SD card reader, line input, line, headphone and subwoofer audio outputs, composite, S-video and component video outputs, iPod sync cable pass-through, 50W RMS power SUPPLIER www.comet.co.uk
DETAILS www.mysymphony.com ✓ Lots of features ✗ Controls a little clumsy
FULL REVIEW May 2007

LOGITECH Z-5450

★★★★★

£202 inc VAT



Logitech's Z-5450 5.1 surround-sound speakers transmit sounds to the rear set wirelessly, so you'll have less clutter in your living room. Sound quality is excellent and the speakers are loud.

With loads of inputs and a decoder, these speakers are perfect for your PC or DVD player.



5.1 SPEAKERS Three line inputs, one coaxial and two optical digital inputs, 315W RMS power PART CODE 970191-0120
SUPPLIER www.morecomputers.co.uk
DETAILS www.logitech.co.uk ✓ Sound great; loads of features ✗ Expensive
FULL REVIEW Dec 2006

SANDISK Sansa c250

★★★★

£60 inc VAT



For £60, this MP3 player's 2GB capacity is appealing enough, but its MicroSD slot provides a convenient way to add even more storage. There's an FM radio, voice recorder and a colour screen for displaying album artwork and photos, but the display resolution is low and its colours look washed out. The menus are responsive and reasonably easy to navigate. Charging is via USB, and Windows Media Player handles music transfers at a passable 2MB/s.

The supplied headphones aren't terrible, but they lack warmth. Similarly, the player sounds OK, but not as focused as Sony's NW-S706F (reviewed left) using the same headphones. Attempting to boost the bass with the custom EQ setting resulted in harsh distortion, regardless of the volume setting.

The c250 has plenty of internal storage and a good set of features for the price, but we'd settle for less if it had better sound quality.

Ben Pitt

SUMMARY

- ☒ Low price
- ☒ Plenty of features
- ☒ Mediocre sound quality

MP3 PLAYER 2GB capacity, supports MP3, WMA, WMA-DRM, Wav, USB Hi-Speed interface
PART CODE SDMX7-2048-E70
SUPPLIER www.misco.co.uk
DETAILS www.sandisk.com

PERFORMANCE (see page 56)



BEHRINGER iAxe 393 USB Guitar

★★★★

£100 inc VAT



The iAxe is a decidedly unfashionable but decent-quality electric guitar that includes a built-in USB audio interface for easy connection to a PC. The ASIO driver avoids appreciable delays between striking a note and hearing it, but using it means that the sound appears from the guitar's headphone output, rather than the PC's speakers. With the right cable you can route it to your speakers' aux input.

The supplied guitar-amp software sounds great but it doesn't work with audio-production software. Certain pickup selections were excessively noisy, and the USB port's position means it risks being damaged when the guitar is sitting on its end. Still, as we surrendered ourselves to the power of USB rock, we soon reached nerdy nirvana.

The guitar is worth £100 on its own, and its USB interface means that tight-fisted parents might be able to wangle their way out of buying their kids a guitar amp.

Ben Pitt

SUMMARY

- ☒ A decent guitar for £100
- ☒ PC recording is awkward
- ☒ USB port badly positioned

GUITAR WITH USB AUDIO INTERFACE
22-fret maple neck, three single-coil pickups, instrument/headphone outputs, USB interface
PART CODE IAXE393
SUPPLIER www.firebox.com
DETAILS www.behringer.com

CHOOSING A... Sound Card

Follow the steps to find your ideal specs

INPUTS: Mic, line

OUTPUTS: Three line (5.1 surround)

CONVERTER SPECIFICATION: 16-bit, 44.1kHz

3D SUPPORT: DirectSound 3D

INTERFACE: PCI

Recommended minimum in grey

1 A sound card with the specifications shown above can cost as little as £10, but it's unlikely to perform any better than a typical motherboard's onboard sound and may not come with any useful software.

2 DVD enthusiasts will need a Dolby Digital decoder for surround-sound DVD audio. This is built into most DVD playback software, so a 5.1 output sound card will suffice. PowerDVD and WinDVD software comes in two-channel and six-channel versions. Make sure you have the six-channel version for surround playback.

If you want to connect to a home cinema amplifier, look for a card with either optical or co-axial S/PDIF outputs.

3 Games enthusiasts will appreciate surround sound, but support for 3D standards adds further excitement. DirectSound 3D allows sounds to pan around the speakers; Sensaura and Aureal technologies make the effect even more convincing. EAX simulates the acoustics of games environments. EAX Advanced HD enhances the capabilities of EAX in compatible games.

4 Those serious about audio fidelity require high-quality digital-to-analogue and analogue-to-digital converters (DACs and ADCs). Most PC audio runs at 16-bit, 44.1kHz, but higher-specified DACs and ADCs running at 24-bit, 96kHz perform better. Creative's Audigy 2 cards play DVD Audio discs, including a stereo 192kHz recording and a surround 24/96 recording.

5 For music production, get a card with all the analogue and digital connections to wire up the rest of your studio gear, plus ASIO drivers for better performance in compatible software.

6 PCI is the standard interface for sound cards, although some add an external or drive bay-mounted expansion box for extra sockets. USB devices are also available to meet most needs.

LOGITECH AudioStation

★★★★★

£128 inc VAT



Logitech's AudioStation is a mid-range iPod speaker dock, but it sounds better than many that cost more. It's the only dock we've tested with an FM tuner, a sensible addition given no iPod has its own. You can't synchronise a docked iPod with your PC, but the AudioStation is great value, and the first iPod dock to deserve our Best Buy award.



IPOD DOCK STEREO SPEAKERS iPod dock connector and 3.5mm stereo line input, composite/S-video outputs, FM radio, 80W RMS power PART CODE 97 0217-0120 SUPPLIER www.morecomputers.co.uk DETAILS www.logitech.co.uk ☒ Clear, loud sound ☒ No iPod PC connector FULL REVIEW Jan 2007

SANDISK Sansa e270

★★★★★

£94 inc VAT

PRICE CUT!



Sandisk's Sansa e270 has 6GB of storage, but it costs about the same as Apple's 4GB iPod Nano. Unlike the Nano, it can play back video files on its colour screen; its software makes it easy to convert and transfer them. It isn't as easy to use as an iPod, but its good battery and sound make it a great choice.

FLASH MP3 PLAYER 6GB capacity, supports MP3, WMA and WMA-DRM music, JPEG/bitmap picture files and proprietary video files, USB Hi-Speed interface PART CODE SDMX4-6144 SUPPLIER www.misco.co.uk DETAILS www.sandisk.co.uk ☒ Lots of space; good sound ☒ Nano has better controls FULL REVIEW Feb 2007



APPLE iPod Shuffle

★★★★★

£50 inc VAT



Apple's tiny iPod Shuffle is affordable and beautifully designed. It's light, with an integrated metal clip that grips clothing securely. The controls are basic: there is just track skip. Battery life and sound are both good, though, so it's a great player if you can live without a screen and don't mind using iTunes.

FLASH MP3 PLAYER 1GB capacity, supports MP3, AAC, protected AAC, Wav, AIFF, audible and Apple lossless music, USB Hi-Speed interface PART CODE MA564ZT/A SUPPLIER www.dabs.com DETAILS www.apple.com/uk ☒ Tiny; great design ☒ No display FULL REVIEW Feb 2007

